REMARKS

Claims 1, 3, 5, 6, 8, and 10-14 are all the claims pending in the application. Claims 6, 8, and 14 are amended to further clarify the invention. In addition, Applicant adds claim 15, which is supported throughout the specification *e.g.*, Fig. 2.

I. Summary of the Office Action

Claims 1, 3, 5, 6, 8, and 10-14 presently stand rejected. Specifically, claims 6 and 8 are rejected under 35 U.S.C. § 112, first paragraph, claim 14 is objected to and is rejected under 35 U.S.C. § 112, second paragraph, and claims 1, 3, 5, 6, 8, and 10-14 are rejected under 35 U.S.C. § 103(a).

II. Claim Rejections under 35 U.S.C. § 112, first paragraph

Claims 6 and 8 are rejected under 35 U.S.C. § 112, first paragraph. Applicant respectfully requests the Examiner to withdraw this rejection in view of the self-explanatory claim amendments being made herein.

III. Claim Rejections under 35 U.S.C. § 112, second paragraph

Claim 14 is rejected under 35 U.S.C. § 112, second paragraph. Applicant respectfully requests the Examiner to withdraw this rejection of claim 14 in view of the self-explanatory claim amendments being made herein.

IV. Claim Objections

Claim 14 is objected as failing to further limit the subject matter of the base claim 1. Applicant respectfully requests the Examiner to withdraw this objection to claim 14 in view of the self-explanatory claim amendment being made herein.

V. Prior Art Rejections

Claims 1, 3, 6, 8, and 10-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant Admitted Prior Art (hereinafter "APA") in view of U.S. Patent No. 5,758,155 to Appelbaum et al. (hereinafter "Appelbaum") and claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over the APA in view of Appelbaum, and further in view of U.S. Patent No. 6,021,478 to Kerstein et al. (hereinafter "Kerstein"). Applicant respectfully traverses these rejections in view of the following comments.

Independent claim 1, among a number of unique features, recites: "wherein when the data access is executed from the primary board to the secondary boards, informing a start address required for data access, and wherein an address used in the data access in the secondary boards is generated based on the start address, a predetermined trigger signal and a cycle signal indicating switching of data...wherein the cycle signal counts plural times a leading edge of a clock signal of the primary board prior to toggle of the cycle signal."

The Examiner alleges that the APA's address A15:2 discloses the start address, as set forth in claim 1 and that the APA's start address A1:0 discloses the cycle signal, as set forth in claim 1. The Examiner acknowledges that the APA does not disclose or suggest the start address signal A1:0 counting plural times the leading edge of a clock signal. The Examiner, however, alleges that Appelbaum's strobe signal cures this deficiency of the APA. The Examiner further maintains that one of ordinary skill in the art would have been motivated to replace the start address signal A1:0 of the APA with the strobe signal of Appelbaum to increase data transfer rate (*see* pages 5-6 of the Office Action). Applicant respectfully disagrees.

The Examiner's proposed combination results in an unworkable and inoperable data transmission system. That is, if one of ordinary skill in the art would have replaced the start address signal A1:0 with the strobe signal, then the secondary boards would not be able to identify that the data is intended for this board. In other words, in the APA, the start address signal A1:0 is used by the boards to detect when the data is intended for its own board (page 4 of the specification). Replacing the start address signal A1:0 with the strobe signal of Appelbaum would result in an unworkable combination by having none of the secondary boards respond to the request for data from the primary board. Accordingly, the proposed combination results in an inoperable data transmission system.

Moreover, the Examiner alleges that by replacing the start address signal A1:0 of the APA with the strobe signal (as shown in Fig. 2) of Appelbaum would improve data transmission. Again, Applicant respectfully disagrees. If anything, Appelbaum teaches away from using the strobe signal as described with reference to Fig. 2.

In particular, Appelbaum discloses that in a conventional technique the strobe signal is set to a predetermined length for accounting for various delays in transfer of data from the peripheral board to the host (Fig. 2; col. 6, line 39 to col. 7, line 4). Appelbaum further discloses that "the necessity to account for these delays limits data transfer rate" (col. 7, lines 2 to 4, emphasis added). In other words, when the strobe signal is set to a predetermined rate, this results in limiting the data transfer rate.

Accordingly, Appelbaum proposes having the peripheral device control the strobe signal and having the peripheral device toggle the strobe signal once the data settles in the ATA bus

(col. 7, lines 26 to 33). In other words, Appelbaum teaches away from having a preset strobe signal that would last *t* clock intervals. That is, Appelbaum teaches away from having the strobe signal count number of clock intervals prior to toggling. Moreover, if this conventional strobe signal is implemented in the technique of the APA, it would result in slower data transfer rate, as the preset strobe signal has to account for the various delays (col. 7, lines 1 to 4 of Appelbaum).

In fact, Appelbaum proposes to toggle the strobe signal by the peripheral drive so that the strobe signal is not set for a predetermined period of time (col. 7, lines 25 to 45). In other words, in the technique proposed by Appelbaum, the transmission rate is increased by having the strobe signal being toggled by the peripheral drive after the peripheral drive places data requested by the host onto the bus, as opposed to simply counting clock signals prior to toggle.

In short, one of ordinary skill in the art would not have and could not have combined the APA and Appelbaum.

Furthermore, the Examiner alleges that A15:2 of the APA is the start address, as set forth in claim 1. The APA, however, clearly discloses that the start address is A1:0 (first full paragraph on page 2 of the specification and paragraph abridging pages 3 and 4 of the specification). That is, the APA fails to disclose or suggest the signal A15:2 being the start address. On the contrary, the A15:2 signal is the remaining address minus the start address that is transmitted as a separate signal A1:0. In other words, the APA's signal A15:2 is not the start address signal and one of ordinary skill in the art would not have viewed it as the start address signal. Accordingly, the APA fails to disclose or suggest a cycle signal (alleged start address A1:0), as set forth in claim 1.

Appelbaum does not cure the deficient disclosure of the APA. Appelbaum does not disclose or suggest "when the data access is executed from the primary board to the secondary boards, informing a start address required for data access, and wherein an address used in the data access in the secondary boards is generated based on the start address, a predetermined trigger signal and a cycle signal indicating switching of data...wherein the cycle signal counts plural times a leading edge of a clock signal of the primary board prior to toggle of the cycle signal." Appelbaum does not disclose or suggest the start address signal from which the address is generated, the predetermined trigger, and the cycle signals.

For at least these exemplary reasons, claim 1 is patentable over the combined disclosure of the APA and Appelbaum. Claims 3 and 11-14 are patentable at least by virtue of their dependency on claim 1.

In addition, dependent claim 13 recites: "the secondary board generates subsequent addresses used in data access based on the start address and wherein the subsequent addresses are generated by the secondary board by incrementing last address used." The Examiner alleges that S233 in Fig. 21 of the APA discloses these unique features of claim 1 (*see* pages 15 to 16 of the Office Action). Applicant respectfully disagrees.

Operation S233 in Fig. 21 of the APA only discloses assigning to the MA 15:0 the transmitted address A15:2 and A1:0. That is, the address MA 15:0 is synthesized from the addresses A15:2 and A1:0 (*see* pages 4 to 5 of the specification). In the APA, however, a subsequent address is not generated. In the APA, the address is simply synthesized from the two transmitted addresses *i.e.*, M1:0 is assigned A1:0 and M15:2 is assigned to A15:2. That is, the

APA fails to disclose or suggest the second board generating subsequent addresses by incrementing the last address used, as required in claim 13. Appelbaum does not cure the deficient disclosure of the APA. For at least these additional exemplary reasons, claim 13 is patentable over the combined disclosure of the APA and Appelbaum.

With respect to independent claims 6, 8, and 10, Applicant respectfully submits that they are patentable for at least analogous reasons.

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentable over APA in view of Appelbaum and Kerstein. Applicant respectfully traverses this rejection in view of the following comments. To begin, Kerstein does not cure the deficient disclosure of the APA and Appelbaum. Accordingly, claim 5 is patentable for reasons analogous to the ones set forth above with respect to claim 1.

In addition, claim 5 recites: "when disturbances are generated on the trigger signal during the data transmission/reception, the memory start address is not incremented." The Examiner acknowledges that the APA and Appelbaum do not disclose or suggest these unique features of claim 5. The Examiner, however, alleges that Kerstein discloses these unique features of claim 5 (*see* page 19 of the Office Action). Applicant respectfully disagrees.

In Kerstein, in operation 704, it is asked whether the CPU wants the memory to latch and drive data on the bus. If no, it is asked if the CPU wants to latch a new address on the address bus, in operation 705 (Fig. 3, lines 4 to 23). These alleged disturbances, however, are clearly not generated during data transmission and reception. In fact, as acknowledged by the Examiner, the alleged disturbances are generated when an output disabling signal is generated on the OE signal

(page 19 of the Office Action). Clearly, when the output disabling signal is generated, it does not disclose or suggest disturbances during data transmission and reception. In short, Applicant respectfully submits that this instance of Kerstein is inapplicable because the transmission/reception of data is not performed when the output disabling signal is generated.

For at least these additional exemplary reasons, claim 5 is patentable over the combined disclosure of the APA, Appelbaum, and Kerstein.

VI. New Claims

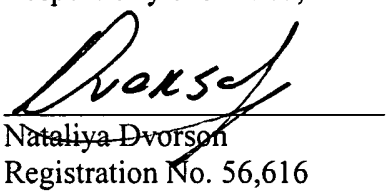
In order to provide more varied protection, Applicant adds claim 15. Claim 15 is patentable at least by virtue of its dependency on claim 1.

VII. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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